

IN THE CLAIMS

Please amend the claims as follows:

1. (Cancelled).

2. (Currently Amended) ~~A method as claimed in claim 1A~~ method for setting an optimum value of a write parameter for use in an optical recording apparatus for writing information on an optical recording medium by means of a radiation beam, the method

5 comprising the steps of:

writing a series of test patterns on the recording medium, each pattern being written with a different value of a write power level (P) of the radiation beam;

reading the patterns so as to form corresponding read  
10 signal portions; and

deriving a value of a read parameter from each read signal portion,

characterized in that the method further comprises the steps of:

curve-fitting a function defining a relation between the  
15 read parameter and the write power level (P) to the values of the read parameter and of the write power level (P); and

setting an optimum value of the write parameter in dependence on a property of the curve-fitted function,

characterized in that in the ~~fourth curve-fitting step (44)~~, a  
20 function represented by a substantially straight line ~~(22)~~ is

curve-fitted to the values of the read parameter and of the write power level (P).

3. (Currently Amended) ~~A~~The method as claimed in claim ~~1~~2, wherein the read parameter is a modulation (M) of the amplitude of a read signal derived from information recorded on the recording medium.

4. (Currently Amended) ~~A method as claimed in claim 3~~A method for setting an optimum value of a write parameter for use in an optical recording apparatus for writing information on an optical recording medium by means of a radiation beam, the method

5 comprising the steps of:

writing a series of test patterns on the recording medium, each pattern being written with a different value of a write power level (P) of the radiation beam;

10 reading the patterns so as to form corresponding read signal portions;

deriving a value of a read parameter from each read signal portion;

15 curve-fitting a function defining a relation between the read parameter and the write power level (P) to the values of the read parameter and of the write power level (P); and

\_\_\_\_\_ setting an optimum value of the write parameter in  
dependence on a property of the curve-fitted function,  
characterized in that the read parameter is a modulation (M) of the  
amplitude of a read signal derived from information recorded on the  
20 recording medium,

\_\_\_\_\_ in that the curve-fitted function ~~(22)~~ is of the form:  
\_\_\_\_\_  $P \cdot M = \alpha \cdot (P - \beta),$   
wherein  $\alpha$  and  $\beta$  have values resulting from the curve-fitting,  
\_\_\_\_\_ and in that the optimum value of the write parameter is  
25 set to be substantially equal to the value of  $\beta$ .

5. (Currently Amended) ~~A~~ The method as claimed in claim 2,  
characterized in that the curve-fitting of the straight line in the  
~~fourth~~ curve-fitting step is carried out in a predetermined fit  
range ~~(28)~~ of write power levels.

6. (Currently Amended) ~~A~~ The method as claimed in claim 5,  
characterized in that the predetermined fit range of write power  
levels is ~~in-between~~  $P_{ind}$  times  $\omega_1$  and  $P_{ind}$  times  $\omega_2$ ,  
where  $P_{ind}$  is a value read from an area on the recording medium  
5 comprising control information indicative of the recording process,  
and where  $\omega_1$  and  $\omega_2$  are predetermined values.

7. (Currently Amended) ~~A~~The method as claimed in claim 5, characterized in that the method further comprises a step of:

\_\_\_\_\_ curve-fitting a provisional straight line,

\_\_\_\_\_ and in that the predetermined fit range of write power

5 levels is ~~in-between~~  $P_{fit}$  times  $\omega_1$  and  $P_{fit}$  times  $\omega_2$ ,

where  $P_{fit}$  is a value derived from the provisional curve-fitted straight line, and where  $\omega_1$  and  $\omega_2$  are predetermined values.

8. (Currently Amended) ~~A~~The method as claimed in claim 6, characterized in that  $\omega_1$  has a value substantially equal to 0.85 and  $\omega_2$  has a value substantially equal to 1.15.

9. (Currently Amended) ~~A~~The method as claimed in claim 5, characterized in that the method ~~also~~further comprises a step of: \_\_\_\_\_ curve-fitting at least a second straight line in at least a second predetermined fit range of write power levels,

5 \_\_\_\_\_ and in that in the ~~fifth~~optimum value setting step, the optimum value of the write parameter is set in dependence on a property of each of the curve-fitted straight lines.

10. (Currently Amended) A method for setting an optimum value ( $P_{opt}$ ) of a write power level ( $P$ ), of a radiation beam, ~~which said~~ method ~~is~~being intended for use in an optical recording apparatus for writing information on an optical recording medium (1) by the

5 radiation beam (5) having the write power level (P), using a method  
as claimed in any one of the claims 4 to 9 for setting an optimum  
value of a write parameter, characterized in that the optimum value  
( $P_{opt}$ ) of the write power level (P) is set to be equal to the  
optimum value of the write parameter times a multiplication  
10 constant ( $\kappa$ ).

11. (Currently Amended) ~~A~~ The method as claimed in claim 10,  
characterized in that the multiplication constant ( $\kappa$ ) is read from  
an area ~~(32)~~ on the recording medium containing control information  
indicative of a recording process whereby information can be  
5 recorded on said recording medium.

12. (Cancelled).

13. (Currently Amended) ~~An apparatus as claimed in claim 12~~ An  
optical recording apparatus for recording information on an optical  
recording medium, said optical recording apparatus comprising:  
a radiation source for emitting a radiation beam having a  
5 controllable value of a write power level (P) for recording  
information on the recording medium;  
a control unit for recording a series of test patterns,  
each pattern being recorded with a different value of the write  
power level;

10        a read unit for reading the patterns and for forming  
corresponding read signal portions; and  
first means for deriving a value of a read parameter from  
each read signal portion,  
characterized in that the optical recording apparatus further  
15 comprises:  
second means for curve-fitting a function defining a  
relation between the read parameter and the write power level (P)  
to the values of the read parameter and of the write power level  
(P); and  
20 third means for setting an optimum value of a write  
parameter in dependence on a property of the curve-fitted function,  
characterized in that the second means ~~(101)~~ are arranged for  
~~curve-fitting~~ curve-fits a function represented by a substantially  
straight line ~~(22)~~ to the values of the read parameter and of the  
25 write power level (P).

14. (Currently Amended)    ~~An~~ The optical recording apparatus as  
claimed in claim 13, characterized in that the read parameter  
derived by the first means ~~(10)~~ is a modulation (M) of the  
amplitude of a read signal derived from information recorded on the  
5 recording medium, and in that the curve-fitted function ~~(22)~~  
represented by a substantially straight line is of the form  $P \cdot M =$   
 $\alpha \cdot (P - \beta),$

wherein  $\alpha$  and  $\beta$  have values resulting from the curve-fitting.

15. (Currently Amended) ~~An~~ The optical recording apparatus as claimed in claim 14, characterized in that the third means ~~(102)~~ are arranged for settingsets the optimum value of the write parameter so as to be substantially equal to the value of  $\beta$ .

16. (Currently Amended) ~~An~~ The optical recording apparatus as claimed in claim 13, characterized in that the second means ~~(101)~~ for curve-fitting a function are arranged for settingsets a predetermined fit range ~~(28)~~ of power levels.

17. (Currently Amended) ~~An~~ The optical recording apparatus as claimed in claim 16, wherein, the read unit ~~(90)~~ is operative to readreads a value ( $P_{ind}$ ) indicative of the fit range from an area on the recording medium comprising control information indicative of  
5 the recording process, characterized in that the second means ~~(101)~~ are arranged for settingsets the predetermined fit range of power levels between  $P_{ind}$  times  $\omega_1$  and  $P_{ind}$  times  $\omega_2$ , where  $\omega_1$  and  $\omega_2$  are predetermined values.

18. (Currently Amended) ~~An~~ The optical recording apparatus as claimed in claim 16, characterized in that the optical recording apparatus further comprises fourth means for curve-fitting a

provisional straight line to the values of the read parameter and  
5 of the write power level (P), and fifth means for setting a value  
 $P_{fit}$  in dependence on a property of the curve-fitted provisional  
straight line, and in that the second means ~~(101) are arranged for~~  
~~setting~~sets the predetermined fit range of power levels between  $P_{fit}$   
times  $\omega_1$  and  $P_{fit}$  times  $\omega_2$ ,  
10 where  $\omega_1$  and  $\omega_2$  are predetermined values.

19. (Currently Amended) ~~An~~ The optical recording apparatus as  
claimed in claim 16, characterized in that the optical recording  
apparatus further comprises fourth means for curve-fitting a second  
straight line in a second predetermined fit range of power levels,  
5 and in that the third means ~~(102) are arranged for setting~~sets an  
optimum value of the write parameter in dependence on a property of  
each of the curve-fitted straight lines.

20. (Currently Amended) ~~An~~ The optical recording apparatus as  
claimed in claim 14, characterized in that the optical recording  
apparatus further comprises setting means for setting an optimum  
value ( $P_{opt}$ ) of the write power level (P) in dependence on the  
5 optimum value of the write parameter.

21. (Currently Amended) ~~An~~ The optical recording apparatus as  
claimed in claim 20, wherein the read unit ~~(90) is operative to~~



~~read~~reads a value of a multiplication constant ( $\kappa$ ) from an area  
~~(32)~~ on the recording medium containing control information  
5 indicative of a recording process whereby information can be  
recorded on said recording medium, characterized in that the  
setting means ~~are arranged for setting~~sets an optimum value ( $P_{opt}$ )  
of the write power level ( $P$ ) by multiplying the optimum value of a  
write parameter by the multiplication constant ( $\kappa$ ).

22. (Currently Amended) An optical recording medium ~~(1)~~ for  
~~recording having information recorded thereon~~ by irradiating the  
optical recording medium ~~by means of~~with a radiation beam ~~(5)~~, the  
recording medium comprising an area ~~(32)~~ containing control

5 information indicative of a recording process whereby information  
can be recorded on said recording medium, the control information  
comprising values of recording parameters for the recording  
process,

characterized in that the control information comprises a value of  
10 a multiplication constant ( $\kappa$ ) for use in the method as claimed in  
claim 5.

23. (Currently Amended) An optical recording medium ~~(1)~~ for  
~~recording having information recorded thereon~~ by irradiating the  
optical recording medium ~~by means of~~with a radiation beam ~~(5)~~, the  
recording medium comprising an area ~~(32)~~ containing control

5 information indicative of a recording process whereby information  
can be recorded on said recording medium, the control information  
comprising values of recording parameters for the recording  
process,  
characterized in that the control information comprises a value  
10 indicative of the fit range ( $P_{ind}$ ) for use in the method as claimed  
in claim 6.